苏伊士 卓越的环境服务提供商 SUEZ An Excellent Environmental Service Provider





全球智慧 本地经验 支持中国的生态转型

面对日益严峻的环境挑战,160多年来,苏伊士集团一直致力于提供保障和改善民生的基础服务,并凭借其创新且富有韧性的解决方案,为客户提供水务和固废服务。集团在40个国家的4万名员工积极赋能客户,为客户在资产和服务的全生命周期内创造价值并推动低碳转型。

苏伊士约 70 年前进入亚洲市场,起步于东南亚,继而扩展至中国的发展也近 50 年。在中国,苏伊士被公认为最具影响力的企业之一,也是引领亚洲环保行业的标杆。如今,苏伊士与各地市政和工业客户的合作项目遍布中国 30 多个主要城市和地区,包括上海、重庆、苏州、天津、青岛及澳门等,在协助客户开发创新解决方案的同时,也为中国的生态转型做出了重要贡献。

Global knowledge & local expertise supporting the ecological transformation of China

Faced with growing environmental challenges, SUEZ has been delivering essential services that protect and improve our quality of life for more than 160 years. SUEZ provides its customers with innovative and resilient solutions for water and waste services. With 40,000 employees across 40 countries, the Group works with customers to create value over the full lifecycle of their assets and services, and to drive their low carbon transition.

In Asia, SUEZ's journey began some 70 years ago, first in Southeast Asia before expanding to China nearly 50 years ago. SUEZ is recognized as one of the most influential companies in China and a service benchmark for leading Asia's environmental industry. Today, SUEZ's cooperative projects with municipal and industrial clients spread across over 30 major cities in China such as Shanghai, Chongqing, Suzhou, Tianjin, Qingdao, and Macao. Across these locations, SUEZ supports municipalities and industries to develop innovative solutions, contributing to China's ecological transition.



6,800万 饮用水服务人口

68 million

people served by drinking water production plants operated by SIIF7



37 million

people with access to sanitation services provided by SUEZ

苏伊士环境科技 卓越的环境服务提供商

苏伊士环境科技以"卓越的环境服务提供商"为价值定位,以"稳定的高质量交付"和"全生命周期竞争力"作为核心价值,为中国市场和客户提供优异的环境服务。在集团内部,苏伊士环境科技定位为"以技术创新引领的苏伊士亚洲业务发展的引擎",同时在技术上努力创建苏伊士"工业水处理卓越中心"、"污泥处理卓越中心"和"环境科技创新中心"。

过去 5 年,苏伊士环境科技在中国市场的专利授权超过了 110 项,在北京建立了工艺验证实验室,并拥有 20 多个测试平台,开展市政、工业与污泥复杂应用场景的技术创新试验与验证,以创新实践展示了创新能力。

SUEZ Environmental Technology An Excellent Environmental Service Provider

SUEZ Environmental Technology (Beijing) Company Limited (formerly SUEZ Water Treatment Company Limited) 's business scope covers water and its related derivatives treatment. In order to better understand and meet market needs and clients' needs, its organization was restructured into three business lines: Municipal, Industry, and Sludge.

SUEZ Environmental Technology positions itself as "An Excellent Environmental Service Provider" in the market and take the "Stable and High-Quality Delivery" and "Full Life-Cycle Competitiveness" as its core values to provide excellent and differentiated environmental services to the Chinese market and clients. Within the Group, SUEZ Environmental Technology positions itself as "The technological innovation-led engine for SUEZ Asia's business development", meanwhile, from the technological perspective, SUEZ Environmental Technology endeavors to become SUEZ's "Industrial Water Excellence Center", "Sludge Excellence Center" and "Environmental Technology Innovation Center".

In the past five years, SUEZ Environmental Technology has been authorized over 110 patents in the Chinese market, established a process validation laboratory in Beijing, and owned more than 20 pilot platforms to carry out tests and validation of technological innovation in complex municipal, industrial and sludge application scenarios. Through innovation practice, SUEZ Environmental Technology has demonstrated innovation capabilities.



在中国的里程碑 **Key milestones in China**

自 1975 年讲入中国以来,苏伊士环境科技已建成超过 420 个工程项目,涵盖了饮用水处理、污水处理、 污泥处理和工业废水处理等多个领域。

Since entering China in 1975, SUEZ Environmental Technology has built more than 420 projects in the fields of drinking water production, wastewater treatment, sludge treatment, and industrial water production and treatment.

● 1984 / 北京

首家讲入中国的国际水处理工程 公司 —— 北京代表处成立 The first international water treatment engineering company to enter China -Establishment of Beijing Representative Office

● 1987 / 澳门

中国第一座采用 V 型滤池工艺的 饮用水厂——澳门青洲水厂 The first drinking water treatment plant with Aquazur® V in China - Macao Ilha Verde Water Treatment Plant

● 1998 / 上海

采用活性炭滤池、高密度沉淀池、 臭氧技术 —— 上海供水项目 Use of Carbazur™, Densadeg™, Ozone technology - water supply project in Shanghai

1998/大连

采用先进的生物滤池工艺 —— 大连马栏河污水处理厂 Use of advanced Biofor™ process -Dalian Malanhe Wastewater Treatment

● 1975/ 這阳

Plant

1970s

—— 辽阳石化污水处理项目 The first contract in China - Liaovang Petrochemical Wastewater Treatment

在中国的第一个合同

1980s

1990s

2000s

● 2001/北京

大型工业企业污水回用项目 —— 北京首钢总公司污水处理厂 Wastewater recycling project of large industrial enterprises - Beijing Capital Steel Group Wastewater Treatment Plant

● 2002 / 北京

得利满水处理系统(北京)有限 公司成立 Establishment of Degrémont Water Treatment Systems (Beijing) Co., LTD.

● 2006 / 澳门

—— 澳门 MSR 扩建工程 Advanced rapid flotation AquaDAF® and membrane technology - Macao MSR Plant

先进的高速气浮和膜技术

● 2007 / 重庆

先进的污泥干化 Evaporis™2E 技术 —— 重庆唐家沱污泥干化项目 Advanced sludge drying Evaporis™ 2E technology - Chongging Tangjiatuo Sludge Drying Project

● 2007 / 刚果

第一个海外项目 ——刚果(布)吉利水厂新建工程 The first overseas project - Congo Brazzaville Diiri Drinking Water Treatment Plant

• 2009 / 四川

包含 Oxyblue® 先进工艺的中国石油 四川石化炼化一体化项目综合污 水外理厂 Integrated Wastewater Treatment Plant for CNPC Sichuan Petrochemical Integrated Refining Project including

advanced oxidation process - Oxyblue®

● 2015 / 大连

嵌入式污水处理厂助力化工企业 绿色发展

——恒力石化炼化—体化项目综 合污水厂

Embedded Wastewater Treatment Plant assists green development of chemical enterprise - WWTP for Hengli Petrochemical Integrated Project

● 2018 / 烟台

臭氧尾气回收至生化池实现纯氧 曝气牛化处理

——万华化学乙烯废水处理项目 Recovery and utilization of ozone exhaust gas into biological treatment tank to achieve pure oxygen aeration -Wanhua Chemical Ethylene Wastewater Treatment Plant

● 2019 / 广州

高密池用于初期雨水一级强化 处理

——广州大观净水厂 Densadeq™ applied in initial rainwater

enhanced primary treatment - Guangzhou Daguan WWTP

● 2019 / 长沙

污泥与牛活垃圾清洁焚烧协同 ——长沙市污泥处置二期工程 项目

Changsha WWTP Sludge and Domestic Waste Clean Incineration Collaborative Disposal Phase II Project

2010s

2020s

● 2020/连云港

● 2012 / 天津

污水深度处理

● 2015 / 北京

——天津津南污水厂

同一品牌——苏伊士

Group become SUEZ

Densadeg[™] applied in extra large

高密度沉淀池应用于超大型市政

municipal WWTP - Tianjin Jinnan WWTP

得利满及集团所有子公司统一为

Degrémont and all subsidiaries of the

三级处理工艺保障浓盐水超高 标准排放

——盛虹炼化—体化项目

Three stages treatment to ensure ultralow discharge of RO brine -Shenghong Refining and Chemical Integration Project

● 2020/北京

《得利满®水处理手册》中文版

Publication of <Degremont® Water Treatment Handbook> Chinese version

● 2021/上海

采用先进的 Thermylis® 2S 工艺的污 泥单独焚烧项目

——上海浦东海滨污泥处置及资 源化利用项目

Sludge incineration project with advanced Thermylis® 2S process -Shanghai Pudong Haibin Sludge Disposal and Resource Utilization Project

● 2022 / 杭州

出水可满足准Ⅲ类水排放限值 ——杭州市城北净水厂

Effluent to meet quasi-III discharge standard - Hangzhou Chengbei WWTP

● 2022 / 苏州

制药废水零排放 ——礼来制药废水浓盐水零排放

The first ZLD in pharmaceutical WW treatment- Suzhou Lilv Pharmaceutical

● 2022 / 烟台

苏伊士在中国的首个海水淡化

——万华蓬莱海水淡化项目

The first desalination project won by SUEZ in China - Wanhua Penglai Seawater Desalination Plant

● 2022 / 北京

更名为苏伊士环境科技(北京) 有限公司

Renamed as SUEZ Environmental Technology (Beijing) Company Limited



五大业务专长 Five proven areas of expertise

苏伊士可以根据各地的经济状况和地域特点为客户提供五个领域的专业技术服务。

SUEZ offers its customers 5 areas of expertise, affordably and tailored to their economic and geographical realities,



饮用水处理 Drinking water production

水资源的日益匮乏需要创新的解决方案。无论何种水源水及水质情况,苏伊士都能加以利用 来生产饮用水……

饮用水的市场方向是由发展中国家和工业化国家共同决定的。遭受用水困难的发展中国家积 极寻求经济可靠的产水方案,而工业化国家则侧重干提高饮用水的舒适度和健康度。苏伊士 在饮用水处理领域拥有砂滤、气浮、超滤等多种技术,这也是在满足客户多元化需求时的一 个关键优势。



The drinking water market is driven both by developing countries and industrial countries. Suffering from their difficulties in accessing water, developing countries are looking for reliable and affordable production solutions. In the industrialized world, the focus is on improving comfort and public health. The diversity of the technologies developed by SUEZ (sand filtration, flotation, ultrafiltration) is a key advantage in responding to these multiple priorities.



海水淡化 Desalination

苏伊士的工艺技术能够利用海水生产淡水来缓解用水紧张的问题,这也是面向未来的一种替 代方案……

海水淡化是应对日益增长的生活用水和工业用水需求的一种新型解决方案。苏伊士能够提供 反渗透海水淡化各阶段的处理工艺,特别是预处理工艺,这些独特、高效的工艺能够确保整 个处理系统的高效性、稳定性和耐久性。

To combat water stress, SUEZ designs technologies capable of producing fresh water from seawater, an alternative for the future...

Desalination is an alternative with the capacity to respond to rising need for domestic and industrial water. SUEZ provides unique and efficient treatment processes for each stage, with a particular focus on pre-treatment in reverse osmosis desalination, the process that dictates the efficiency, reliability and durability of membrane-based systems.



市政污水处理和回用 Municipal wastewater treatment and reuse



苏伊士在市政污水处理领域的技术专长和经验可确保地方政府和工业客户实现公共健康和环 境安全的目标,同时完全满足法规及标准的要求。苏伊士还提供污水回用处理工艺以满足农业、 市政和工业领域对回用水的需求,或者作为恢复水资源储备的一种比较经济的手段。

Solutions of SUEZ enable rain and household water to be treated to a level of quality that opens up many possibilities..

SUEZ's expertise and experience in this field guarantee local authorities and industrial customers public health and environmental safety as well as full compliance with regulatory requirements. SUEZ also supplies processes for the reuse of wastewater to meet agricultural, urban and industrial needs, or as an affordable means to restore natural water reserves.

生物固废和污泥处理 Biosolids and sludge treatment

苏伊士致力于从污泥中汲取能源、减少污水处理所产生的废弃物量……

作为污水处理的副产物,污泥的处理处置需要优先考虑经济性和环境友好性。随着法规及标 准的提高和污水处理工艺的改进、污泥的产量显著增加。针对这一问题、苏伊士可为客户提 供包括消化、浓缩、脱水、干化及焚烧在内的多种处理工艺。

Extracting energy from sludge, cutting the amount of waste resulting from wastewater treatment...

As a secondary product of wastewater treatment, sludge is a major economic and environmental priority. As a result of regulatory changes and better wastewater treatment processes, sludge quantities have increased significantly. To deal with this issue, SUEZ offers its customers a wide range of processes, from digestion, thickening, dewatering and drying, through to incineration.



工业领域水处理 Industrial water production and treatment

苏伊士可为工业客户量身打造适合的工艺水生产和废水处理解决方案……

工业废水处理是一个发展迅速的领域,苏伊士能够充分利用自己的技术专长从众多工艺中选 取最合适的解决方案以满足最严格的排放标准要求。并且,苏伊士的技术能力在工业领域已 获得了客户的广泛认可。

SUEZ aids its industrial customers in the selection of solutions tailored specifically to their process water production and effluent treatment needs...

Industrial wastewater treatment is a fast-growing sector. SUEZ is able to draw on its expertise in a wide array of processes to provide water production solutions compatible with the most sensitive industrial requirements. SUEZ's expertise is widely acknowledged on this market.









核心产品 Our flagship products

44

苏伊士环境科技提供的多种工艺技术和服务既有助于合理利用水资源、减少环境足迹又可以开发新的替代资源······

SUEZ Environmental Technology offers a range of products and services that favor the responsible use of water, mitigation of environmental impact and identification of alternative resources...

饮用水

为满足最新的公众健康需求,苏伊 士环境科技已经开发了一系列前沿 的技术及解决方案:从气浮到超滤, 在结构的紧凑性、控制的自动化程 度、性能的可靠度以及性价比等方 面都在不断提升。

Drinking water

In order to meet new public health requirements, SUEZ Environmental Technology has developed state-of-the-art solutions: from flotation to ultrafiltration, our technologies are increasingly more compact, automated, reliable and cost-efficient.



Densadeg™ 高密度澄清池

自带污泥浓缩功能的高效澄清处 理工艺:具有超强的抗冲击能力, 适用于各种原水的处理,占地小

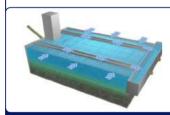
Highly efficient clarification process with strong resistance to variation of flow and water quality, and integrated sludge thickening function: applicable to various raw water treatment, small footprint



Pulsatube™脉冲澄清池

经典的脉冲式节能型澄清工艺: 设备数量少,管理简单,适用于 各种原水,可适应较大的水质波 动、占地小

Classic pulse energy-saving clarification process: less equipment, easy to management, applicable to various raw water, adaptable to large variations of water quality, small footprint



Pulsazur® 炭吸附脉冲澄清池

低能耗的有机物高效吸附澄清工艺: 碳水接触时间长, 粉末活性炭利用率高, 可根据水质变化灵活运行, 投资及运行成本低

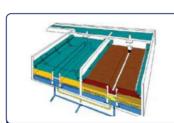
Organic adsorption clarification process with low energy consumption: long contact time of carbon and water, flexible operation according to the variation of water quality, low CAPEX & ODEY



AquaDAF® 高速气浮池

用于地表水澄清处理的超高速气 浮工艺:适用于处理高藻、低浊 和低温水,除藻效率高,占地极 为紧凑

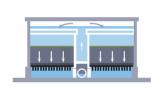
Ultra high-speed air flotation process for surface water clarification: extremely compact process for algae and suspended solid removal, applicable to high algae, low turbidity, and low temperature water treatment



Aguazur® V型滤池

经典的气水反冲洗砂滤工艺

Classic sand filter with combined air + water backwash



CarbMediazur™ 炭砂滤池

集成了颗粒活性炭和石英砂的双层滤料滤池,具有物理化学吸附及生物降解的功能,同时还可实现物理截留

Dual-layer filter integrating GAC and sand media, combined effects of physico-chemical adsorption, biological degradation, and physical interception

海水淡化

站在海水淡化技术创新的最前沿, 苏伊士始终将可持续发展放在首要 位置,包括利用风能、回收能量、 采用可最大程度减少膜清洗的预处 理系统及改善浓水排放方式以保护 海洋生物。

Desalination

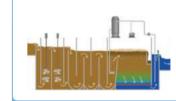
At the cutting edge of innovation in desalination, SUEZ Environmental Technology is fulfilling sustainable development priorities: use of wind power, energy recovery, pretreatment systems to minimize membrane washing, improved concentrate dispersion processes to protect marine wildlife.



Seaclean® 双介质过滤器

加压的大型卧式双介质过滤器:可替代超滤用于反渗透的预处理,出水水质几乎与超滤的出水水质一样,使用寿命长,无需化学清洗

Pressurized large horizontal DMF tank for RO pre-treatment as a substitution of ultrafiltration: effluent quality almost the same as that of ultrafiltration, with long service life and no chemical cleaning required



SeaDAF® 高速气浮池

用于海水淡化预处理的超高速气 浮工艺:可高效去除藻类和悬浮 物的紧凑型溶气气浮

Ultra high-speed air flotation for desalination pre-treatment: compact dissolved air flotation to effectively remove algae and suspended solids



Smartrack® 万能超滤膜架

高品质的模块化加压式超滤万能 膜架:兼容国内外主流品牌不同 超滤膜

High quality and modular pressurized UF membrane rack for desalination: compatible with different brand UF membranes



核心产品 Our flagship products

市政污水处理和回用

为了确保更好的生物多样性保护, 苏伊士环境科技开发了许多占地紧 凑、节省能耗、药耗的污水处理工 艺。此外,苏伊士还可提供能够满 足工业、农业及市政领域回用水需 求的污水回用处理技术。

Municipal wastewater treatment and reuse

Innovative for their compact size and reduced energy and reagent consumption, these technologies guarantee better biodiversity protection. In addition, SUEZ Environmental Technology supplies solutions that reuse treated water for agricultural, industrial or municipal purpose.



Densadeg™ 高密度沉淀池

高效的物化工艺,即可用于做预处理,也可用做深度处理,具有超强的抗冲击能力并自带污泥浓缩功能,占地紧凑,污染物去除率高

Highly efficient physico-chemical process for primary or tertiary treatment with strong resistance to variation of flow and water quality, and integrated sludge thickening function: compact footprint, ultra high pollutants removal rate



Sedipac™高密度沉淀池

具有沉砂除油功能的紧凑型高效 沉淀池,尤其适用于污水的初级处 理,无需投加化学药剂,占地省

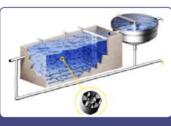
Compact and highly efficient sedimentation tank with grit and grease removal, especially for primary wastewater treatment: no chemical dosing required, small footprint



Biofor™ 生物滤池

专利的紧凑型上向流生物滤池工艺,能够适应较大的水质波动, 去除率高负荷高,占地面积小

Patented compact upflow biofilter process: adaptable to large variations of water quality, high removal rate and load. small footprint



Meteor™IFAS 活性污泥工艺

固定膜活性污泥工艺,结合了传统活性污泥法和生物膜技术,有效提升污水处理效率,适用于污水厂的新建和提标

Integrated fixed-film activated sludge process that combines traditional activated sludge process and biofilm technology: effectively improve wastewater treatment efficiency and applicable to WWTP construction and upgrading



Ultrafor® 膜生物反应器

集成了最新的超滤膜及膜清洗技术的 MBR 工艺,处理效率高,出水水质好,占地面积小

Leading MBR process integrated with the latest ultrafiltration membrane and membrane cleaning technology: high efficiency, excellent effluent quality, small footprint



Denifor V™ 丹尼弗 ——深度脱氮 V 型滤池

高负荷下向流反硝化 V 型生物滤池,可实现同步脱氮除磷并去除悬浮物。

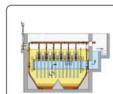
High load downward-flow denitrification biological filter developed from Aquazur® V: simultaneous removal of phosphorus, nitrogen and suspended solid



GreenDAF® 高速气浮池

用于污水深度处理的紧凑型超高速溶气气浮工艺,可高效除磷及去除 SS, 出水水质好, 占地少,设备及土建费用低

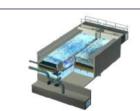
Compact and ultra high-speed flotation process for wastewater tertiary treatment: highly efficient phosphorus and SS removal, good effluent quality, small footprint, low equipment and civil work cost



Compakblue® 转盘式过滤器

适用于污水深度处理中的 SS 去除,可代替砂滤,占地省,水头损失小

Submerged disc filter to remove SS, an alternative solution of sand filter with less footprint and head loss



Flopac™ 好氧 V 型生物滤池

高负荷下向流好氧 V 型生物滤池, 在污水深度处理中可同步去除 BOD、磷及 SS

High load downward-flow aerated biological filter developed from Aquazur® V: simultaneous removal of BOD, phosphorus and suspended solid in WW tertiary treatment



核心产品 Our flagship products

生物固废/污泥

苏伊士环境科技在生物固度 / 污泥 处理处置领域拥有多项技术专长, 目标是将污泥有效地应用在农业 及能量利用领域。无论污泥的最 终用途是什么,处理质量始终是 我们创新的关注点。

Biosolids / sludge

When it comes to biosolids /sludge, SUEZ Environmental Technology possesses expertise in multiple areas, aiming to efficiently reuse sludge into land, building materials or heat and power generation. Whatever the final purpose of the sludge produced, treatment quality is always the focus of innovation.



Dehydris® Twist 脱湿特高干脱水机

独创的全自动超高干度绞压式污泥脱水机

Unique fully automatic sludge piston press system with ultra-high dryness



Digelis® Turbo 高温热水解增强型消化技术

成熟的加强型污泥热水解消化组 合工艺

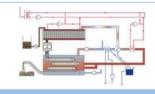
Mature enhanced combined sludge treatment processes of thermal hydrolysis and anaerobic digestion



Evaporis™1T 薄层干化工艺

紧凑的传导式干燥机,基于薄膜 蒸发原理的间接干化工艺,适用 于脱水污泥独立焚烧或协同焚烧 的半干化应用场景

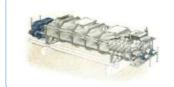
Compact conductive dryer, based on the principle of thin-film evaporation, employs an indirect drying process, suitable for semi-dry application scenarios of dehydrated sludge independent incineration or co-incineration



Evaporis™2E 两段式污泥干化技术

能耗最低且具有极高安全性的独 创型两段式污泥干化工艺

Creative two-stage sludge drying process with minimal energy consumption and maximum safety



Evaporis™ 1P 桨叶式干化

可处理高粘滞工业污泥的干化处 理技术,系统配置灵活、安全系 数高

Flexible and safe sludge drying process for high viscosity industrial sludge treatment



Thermylis[®] 25 预干化 ——高温流化床焚烧技术

针对中国污泥热值偏低的问题,该工艺为最可行的解决方案

The most feasible process for sludge with low calorific value in China

工业领域

苏伊士环境科技的水处理技术能够 满足工业领域最严苛的用水水质需 求,助力客户生产各类工业产品。 与此同时,苏伊士在工业废水处理 领域也拥有深厚的技术积累及全面 的技术储备,可根据客户面临的具 体问题提供性价比高,环境友好的 解决方案。

Industry

SUEZ Environmental Technology's technologies produce water that is consistent with the most critical industrial needs, contribute to our customers' industrial processes, and provide the raw material needed to manufacture a wide range of products. Also, with deep technical accumulation and comprehensive technical reserves in the field of industrial wastewater treatment, SUEZ can provide cost-effective and environmentally friendly solutions tailored to the specific problems faced by clients.



Densadeg™高密度沉淀池

可有效去除工业废水中的硬度、 硅、氟、重金属、悬浮物等的高效沉淀工艺,处理负荷高,占地 紧凑,对可沉降型污染物的处理 效果好

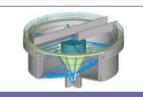
Highly efficient sedimentation process for hardness, silicon, fluorine, heavy metal, and suspended solids removal: high processing load, compact footprint, and excellent treatment effect on sedimentable contaminants



Biofor™ DN 生物滤池

上向流反硝化生物滤池,处理负荷高,过滤速度快(10-30m/h),占地面积小,适用于总氮去除量>10mg/L的需求

Upflow denitrification biological filter with high processing load, fast filtration rate (10-30m/h), and small footprint, applicable to treatment needs of total nitrogen removal more than 10 mg/L



DCI™隔油分离器

专利的高效除油工艺:除油效率高,耐冲击,结构简单,故障率极低

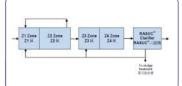
Patented circular interceptor for oil removal: compact and high efficiency, strong resistance to the variation



Sediflotazur™气浮池

高效容气气浮工艺: 既可用于污水的预处理, 也可用于污水的深度处理, 能够高效去除水中的乳化油和 SS

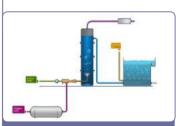
Highly efficient air flotation process: compact process to remove emulsified oil and suspended solid, can be used as a pre-treatment or tertiary treatment



Nitrotor™ 活性污泥工艺

改良型多级 AO 工艺,可灵活改变各区功能,以应对复杂的工业废水水质

Optimized multiple stage AO process, better suit to complex wastewater quality



Oxyblue®臭氧生物滤池工艺

臭氧氧化与生物滤池组合、高效 去除难降解 COD 的清洁工艺:无 耗材、无化学污泥等副产物

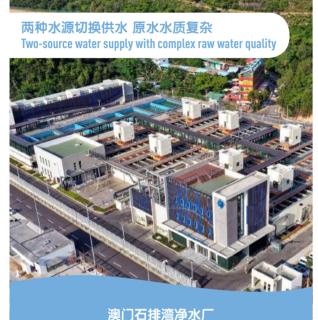
Clean process combining ozonation with biological filter for efficient removal of refractory COD: no consumables, no chemical sludge or other by-products



典型业绩 Typical references

满足超高的总氮排放要求

Advanced removal to meet extra high TN discharge requirement



澳门石排湾净水厂的水源来自西江水和竹银水库水,雨季高浊、 短时有机物偏高:春季水库水低浊高藻、还存在有机物污染。 水厂采用了 Pulsatube™ 脉冲澄清池和 Pulsazur® 炭吸附澄清池有效 应对水源和水质多变的问题、确保合格的供水水质。

The water source of Macao SPV DWTP comes from West River and Zhuvin Reservoir. In the rainy season, the water turbidity and the short-term organic matter is high: In spring, the reservoir water has low turbidity, high algae content, and also organic pollution. The SPV DWTP adopts Pulsatube™ and Pulsazur® to effectively deal with the problem of variable water sources and water quality and ensure a qualified water supply.

处理量 Capacity: 130,000 m³/d 主要工艺 Main Processes: 脉冲澄清池、炭吸附澄清池、V型滤池 Pulsatube™, Pulsazur®, Aquazur® V

Macao Seac Pai Van drinking water treatment plant

珠海乾务水厂 | 期将折板絮凝平流池改造为高速气浮, 并扩建 Ⅱ期,使得水厂整个都采用了高速气浮,有效应对低浊高藻的 水质, 保证了日常供水的安全。

The phase I project of Zhuhai Qianwu DWTP reconstructs the horizontal flow folded-plate flocculating tank into AquaDAF®, and then expands the scale in phase II project with the full application of AquaDAF® to effectively treat the low turbidity and high algae water and ensure the safety of daily water supply.

处理量 Capacity: 280,000 m³/d 主要工艺 Main Processes: 高速气浮、V 型滤池 AquaDAF®, Aquazur® V



珠海乾务水厂 Zhuhai Qianwu drinking water treatment plant



南京桥北污水厂

Nanjing Qiaobei wastewater treatment plant

南京桥北污水厂采用了 Denifor V™ 深度脱氮 V 型滤池、用于深度 处理中去除 TN、出水 TN 和 SS 均可稳定小于 5mg/L, 同时 TP 小于 0.1mg/L、是国内最早实现超高 TN 排放要求的污水厂之一。

Nanjing Qiaobei WWTP adopts Denifor VTM to remove TN in the advanced treatment process. The concentration of TN and SS can be reduced to less than 5mh/L stably in the effluent, and the TP concentration can be reduced to less than 0.1mg/L. This WWTP is also one of the pioneering WWTPs which meet the high requirement on TN discharge standard.

处理量 Capacity: 150,000 m³/d 主要工艺 Main Processes: 深度脱氮 V 型滤池 Denifor V™

长沙市开福污水处理厂位于长沙市开福区浏阳河北侧,总处理 规模 30 万吨 / 天。苏伊士运用"镶嵌式改造"方案,分别对其 二级生物处理单元、深度处理单元进行了原位改造, 在不增加 用地和不停产的情况下,将整个污水厂扩容至35万吨/天,且 出水水质从一级 A 提升至地表水准 IV 类标准。

Changsha Kaifu wastewater treatment plant is located on the north side of Liuvang River, Kaifu District, Changsha City, with a total treatment capacity of 300,000 t/d. SUEZ adopts the "inlaid transformation scheme" to carry out in-situ upgrading of its secondary biological treatment unit and advanced treatment unit. This scheme eventually expands the treatment capacity of the entire plant to 350,000 t/d without land expansion and production halt, and the effluent quality is upgraded from Grade 1A to quasi-IV surface water standard.

处理量 Capacity: 350,000 m³/d

"Meteor™-IFAS + 一体化斜板沉淀池"工艺, Biolex™ DN 反硝化生物 滤池, Densadeg™ XRC 极速高密度沉淀池

"Meteor™-IFAS + Integrated Inclined Plate Sedimentation" process . Biolex™ DN. Densadeg™ XRC

典型业绩 Typical references



苏州工业园区污泥干化项目采用苏伊士两段式干化工艺(Evaporis™2E),利用热电厂的余热蒸汽干化污水厂产生的污泥,蒸汽冷凝后的热水回到热电厂循环利用;干污泥作为生物质能源送至热电厂与煤掺烧发电,生产废气送至电厂锅炉焚烧,彻底解决了二次污染问题,同时避免了邻避效应。

In Suzhou industrial park sludge drying project, SUEZ's Evaporis™ 2E two-staged drying process is applied to dry sludge generated from the wastewater treatment plant, using waste heat steam from a thermal power plant. And the hot water condensed from steam is transferred back to the thermal power plant for recycling. The dried sludge is sent to the thermal power plant as biomass energy source to be mixed with coal for power generation, and the production waste gas is sent to the boiler of the power plant for incineration, which completely solves the secondary pollution problem and avoids the NIMBY syndrome at the same time.

处理量 Capacity: 500 t/d 脱水污泥 主要工艺 Main Processes: 两段式污泥干化工艺 Evaporis™ 2E sludge drying

高效节能环境友好
Energy-efficient and environment-friendly

上海浦东污泥处理处置工程
Shanghai Pudong sludge treatment and disposal project

上海浦东污泥处理处置工程采用苏伊士的专有污泥焚烧技术(Thermylis® 2S),对烟气热能进行梯级回收利用,能尽其用,烟气经过深度处理后实现了超净排放,同时焚化灰回收后被用作建材原料,从根本上保障了浦东南片地区污水处理厂污泥的稳定化、减量化、无害化处置,同时实现了灰渣的资源化利用。

By using SUEZ's Thermylis® 2S sludge incineration system, Shanghai Pudong sludge treatment and disposal project makes full use of flue gas thermal energy and realizes its cascaded utilization. After advanced treatment, the flue gas has achieved ultra-clean emission standard, and at the same time, the incineration ash is recycled and used as building materials. This project fundamentally guarantees the stabilized, reduced and harmless disposal of sludge from wastewater treatment plants in Pudong South Area and realizes the resource utilization of ash residue.

处理量 Capacity: 800 t/d 脱水污泥,高峰 1,040 t/d 脱水污泥 主要工艺 Main Processes:

半干化、高温流化床、余热回收、烟气处理 Pre-drying, Thermylis® 2S, Waste heat recovery, Ash pollution control



上海化工区水厂是苏伊士的"脱湿特"高干脱水机在中国的首次应用,在该项目中,脱水后的污泥含固率可达到49%以上。"脱湿特"为全封闭操作系统,并配备了臭气收集罩收集卸料过程中产生的臭气,可实现全方位的除臭,确保了工作环境的安全。

SCIP Water Treatment Plant is the first application of Dehydris® Twist in China. The dry solid in this project is higher than 49%. Dehydris® Twist is a fully enclosed system with a collection hood to receive the odorous gas generated during the unloading process, which can achieve all-round deodorization and ensure the safety of the working environment.

处理量 Capacity: 228 tDS/d **主要工艺 Main Processes:** 污泥浓缩池、脱湿特 Static sludge thickener, Dehydris® Twist





万华化学集团蓬莱海水淡化项目 Wanhua Chemical Group's Penglai seawater desalination plant 万华化学集团计划在烟台蓬莱新建一个化学工业园区,苏伊士将为其设计并建造一座 10 万吨 / 天的高工业标准反渗透海水脱盐工厂,将淡化海水作为化学工业园区的替代水资源。该项目在设计时将循环经济原则纳入考量,与邻近电厂充分协同,在大大降低反渗透工艺电耗的同时,每年还将节约 3600 多万立方米淡水。

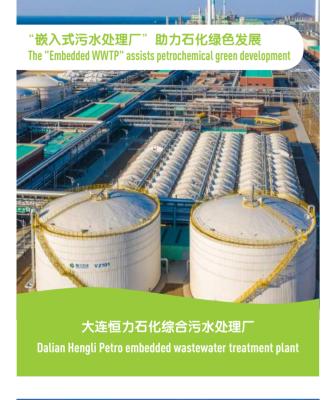
Wanhua Chemical Group is planning to build a new chemical industrial park in Penglai District, Yantai City, Shandong Province. SUEZ has been awarded a contract to design and build a 100,000 m³/d seawater reverse osmosis (SWRO) desalination plant with high industrial standard: the plant will use seawater as an alternative water source for the chemical industrial park. Designed with the principles of circular economy in mind, the SWRO desalination plant will operate in full synergy with the adjacent power plant to cut down electricity consumption of the reverse osmosis process. Once commissioned, the desalination plant will save more than 36 million m³ of freshwater per year.

处理量 Capacity: 100,000m³/d 主要工艺 Main Processes:

双介质过滤器,反渗透系统

Dual media filter, reverse osmosis system

典型业绩 Typical references



苏伊士在本项目中率先引入了"嵌入式污水处理厂"的理念,在污水处理厂的设计过程中充分考虑了上游石化装置所产生的污染物并对其充分利用,实现了以"废"制"废",在大大减少污染物排放的同时有效降低了企业的运行成本。

SUEZ pioneers in introducing the "embedded WWTP" concept to this project. Pollutants from upstream petrochemical plants are fully considered in the design process of the wastewater treatment plant and eventually fully utilized, which realizes the idea of treating waste by waste and reduces pollutant emissions while effectively lowering the operating costs.

处理量 Capacity: 炼油废水 36,000 m³/d, 乙烯废水 21,600 m³/d 主要工艺 Main Processes:

Nitrotor™ 生化池、Densadeg™ 高密度沉淀池、Oxyblue® 臭氧生物滤池、Biofor™ DN 反硝化生物滤池、Biofor™ CN 生物滤池
Nitrotor™, Densadeg™, Oxyblue®, Biofor™ DN, Biofor™ CN

循环经济、绿色发展 Circular economy and green development



万华烟台工业园综合废水处理装置及浓水深处理 Wanhua Yantai industry park integrated wastewater treatment plant and brine treatment 苏伊士在本项目中创新性地采用"OxyBioGreen™臭氧尾气曝气活性污泥工艺",将臭氧尾气回用至曝气生化处理段,在极大提高了生化处理段处理效率的同时大幅减少了电耗,为用户创造了显著的经济效益,处理出水满足国内最严格的工业废水排放标准。

SUEZ's innovative application of "OxyBioGreen™ ozone off gas aeration & activated sludge process" in this project, which reuses ozone off gas in aeration biological treatment process, greatly improves the treatment efficiency and reduces power consumption. It can provide significant economic benefits for the user, and the treated effluent can meet the most stringent requirement on industrial wastewater treatment in China.

处理量 Capacity: 乙烯废水 16,800 m³/d, 东区综合废水 45,000 m³/d 主要工艺 Main Processes:

Nitrotor™ 生化池、Densadeg™ 高密度沉淀池、Oxyblue® 臭氧生物滤池、AOP™ 高级氧化、Biofor™ DN 反硝化生物滤池
Nitrotor™, Densadeg™, Oxyblue®, AOP™, Biofor DN™



泰兴经济开发区是全国最早的专业性精细化工园区之一。2020年园区新建了一座5万吨/日的集中式污水处理厂,苏伊士提供了包括了主处理线、预处理线、除臭线以及污泥处理线的工艺技术,处理后的出水能够满足江苏省及长江沿线严格的污水排放标准。

Taixing Economic Development Zone (Taixing EDZ) is one of the earliest professional fine chemical industrial parks founded in China. In 2020, a new centralized WWTP with treatment capacity of 50,000 t/d was built in the park. SUEZ provides process technology for its main treatment line, pretreatment line, deodorization line and sludge treatment line, and the treated effluent can meet the strict wastewater discharge standards of Jiangsu Province and along the Yangtze River.

处理量 Capacity: 50,000 m³/d

主要工艺 Main Processes:

Nitrotor™ 生化池、Densadeg™ 高密度沉淀池、Oxyblue® 臭氧生物滤池 Nitrotor™, Densadeg™, Oxyblue®

复杂、高浓度工业污水处理 Complicated high concentration industrial wastewater treatment



エバロングログラス文字がロ <u>Shanghai chemi</u>cal industry park wastewater treatment project 上海化工园区为国家级经济技术开发区,也是国家生态工业示范园区、全国循环经济先进单位。结合园区"环境保护一体化"的理念及污水水质复杂、浓度高的特点,苏伊士充分利用自身的技术专长,采用稳定安全、先进且易于操作维护的工艺,在确保园区污水达标排放的同时实现了最优的投资成本和运营成本。

Shanghai Chemical Industry Park (SCIP), a National-level Economic and Technical Development Zone, is also recognized as a National Demonstration Eco-industrial Park and National Advanced Unit in Circular Economy. Considering SCIP's "integration of environmental protection" concept and the complicated and high-

"integration of environmental protection" concept and the complicated and high-concentration industrial wastewater generated in the park, SUEZ provides stable, safe, advanced, and easy-to-operate processes making full use of its technical expertise, ensuring that the park's wastewater is discharged in accordance with standards while achieving optimal investment and operating costs.

处理量 Capacity: 50,000 m³/d

主要工艺 Main Processes:

A2/0 生化池、气浮池、Oxyblue® 臭氧生物滤池、Carbazur™ 颗粒活性炭吸附池

A2/0, Floatation, Oxyblue®, Carbazur™

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